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THE GENESEE FARMER.

SATURDAY, JANUARY 19, 1839.

DICTIONARY
OF
TERMS USED IN AGRICULTURE,
AND IN THE SCIENCES MOST INTIMATELY CONNECTED WITH ITS ADVANCEMENT.

AMMONIA. Volatile alkali. It is a transparent, colorless gas, of about half the weight of common water, with an exceedingly pungent smell, extinguishes flame, and is fatal to life. Its old name was 'spirits of hartshorn.' To the agriculturist, ammonia is particularly interesting from the fact that those substances that contain the most of it, are the most efficient manures, and act with the most certainty and promptness. Ammonia is produced from soft or fluid animal substances while in the process of decomposition, and this change is rapid in proportion to the quantity of earthy salts they contain. "It is particularly to the developments of ammonial gas," says Chaptal, "which, combined with gelatine, passes into plants, that we can attribute the wonderful effect produced upon vegetation by certain animal substances." These substances are the animal manures, the urine, *poudrette*, the bones, horns, hair, &c. The urine of the animal contains in muriates and carbonate of ammonia about 20 per cent, besides 11 per cent of phosphate of lime and sulphate of potash, or 30 per cent of the most active manure yet discovered; and the saving and proper distribution of it forms an important item in Flemish husbandry. The larvæ left after the cocoons are reeled in the extensive silk manufactories of France and Italy, are considered invaluable as a manure. Their excellence is owing to the ammonia they contain, which in them Chaptal found to exceed in quantity that of any other animal substance.

ANALYSIS. To determine the value of any soil, or to be able to correct any fault in the original constitution, or any deficiency arising from improper cultivation, it is necessary that the nature and proportion of the substances composing it should be understood. In agriculture this examination is termed analysis; and in its simplest, yet still effectual method, may be practiced by every farmer. The implements required are a pair of scales, accurate to the tenth part of a grain; a crucible; some muriatic acid, and a few small vessels of china or glass,

The earth to be tested by the farmer should be taken from a few inches below the surface, and be an average specimen of the field, or the soil to be examined. The quantity to be examined say 2 or 400 grains is to be slightly pulverized or well mixed together. Put of this, 200 grains in a crucible, and heat it to 300° of Farrenheit, or bake it in an oven heated for bread for 15 minutes; cool and weigh. This will show the absorbent power of the soil, and as this is depending mainly on the animal and vegetable matter, if the loss is considerable it is a decisive proof in this respect of fertility. The absorbent power varies from 1 to 12 per cent.

After weighing, heat it again in the crucible to a red heat, and until the mass shows no bright or sparkling particles, stirring it with a glass or iron rod; cool and weigh, and the loss will be the animal and vegetable matter in the soil.

Take 200 grains of the dried earth, mix it thoroughly with a gill of water by stirring it for several minutes. Let it stand for 3 minutes, and turn off the muddy water into another glass. Dry the sediment in the first glass at a high heat, weigh, and it gives the silica contained in the soil. Let the water turned off settle clear, turn it off, dry at a high heat and weigh; this gives the alumine or clay.

Put into a suitable glass or flask, one fourth of a gill of muriatic acid and water in equal proportions, and balance the scales carefully. Put into this mixture, 100 grains of the earth, let it stand till all effervescence has ceased, which will sometimes be an hour or more; carefully note the weight required to again balance the scales, and that may be set down as the weight of carbonic gas expelled, say 6 grains. Then as 45 is to 55 so is this weight to that of the base, or the lime. In this case the lime would be 7¼ per cent.

To ascertain if earth contains iron, stir the muriatic acid and water with a strip of oak bark, and if iron is present in the liquid the bark will turn dark. To ascer the quantity, put in prussiate of potash till it no longer forms a blue precipitate, let it settle, heat the deposit to redness, carefully weigh the remainder, which is oxide of iron.

To determine the presence of gypsum, take 400 grains of earth, mix one-third the quantity of powdered charcoal, keep in at a red heat in a crucible for half an hour. Then boil the earth in a pint of water for 30 minutes, filter the liquor and expose it for some days in an open vessel. A white deposit will be sulphate of lime, and the weight will determine the proportion.

These processes are all simple, and can be performed by any one. By them we obtain—first, the absorbent power; 2d, the amount of animal and vegetable matter; 3d, the silica or sand; 4th, the alumine or clay; 5th, the carbonate of lime; 6th, the oxides of iron; and 7th, the gypsum or plaster of Paris. The salts exercise a great influence on vegetation; but as they principally depend on the animal and vegetable matter in the soil, and as the determining their qualities and kinds are too difficult for the analysis of the farmer, the processes are omitted. The above ingredients are all that exert a marked influence on the fertility of soils, and on their proper proportion its goodness depends. If soils contain too much silica or gravel, they are porous; and if too much clay, retentive. The last is usually the worst fault, and may be known by the water standing upon it after rains, remaining unsettled for a long time, owing to the clay held in solution. Wheat winter kills on such soils; or calcareous gravelly ones rarely. Good soils usually contain from 65 to 75 of silica; from 10 to 16 of alumine; from 4 to 10 of lime, and varying proportions of vegetable matters, animal and mineral salts, &c. The analysis of soils forms one of the most decided steps in the improvement of agriculture, as it clearly points out what is wanting to remedy any defect, and give ease of working, and abundance in product. Every farmer should understand the nature and composition of his soils, and may do so, with little time, and at a mere trifle of expense.

ANIMALCULÆ. The microscope has opened to the observation of man a race of beings so small as to be utterly invisible to the naked eye, yet endowed with all the functions of vitality and perfectly organized animals. Some of these are called Infusoriæ, from being always found in water where plants are decaying, and some Diatonicle, but all included under the term animalculæ. They have long been regarded more as objects of mere curiosity than any thing else; but recent discoveries seem to indicate that these minute insects have had an important influence in modifying the crust of the earth, and giving it the character it now possesses. Mountains of flinty rock in Silecia have been found by Ebrenberl to be wholly composed of the shells of animalculæ; and in this country masses of remains of the infusoriæ have been found several hundred yards in extent. Unlike the shells of the molusca and testacea, which are lime, the shells of these invisible animals are found to be unchanged by fire, and composed of pure silica. All bodies of long stagnant water such as those where peat is formed, or bog earth deposited, abounds with infusoriæ, and Prof. Bailey of West Point has found at the bottom of peat earth and in it, immense quantities of these minute remains. It is a curious fact that animals invisible in themselves to the eye, should be able in the course of centuries to form mountains, change the face of continents, and exert an influence by no means trifling on the labors and productive industry of man.

ANNUAL. This term is applied to plants that arrive at maturity in a single year and then perish. The stem of annuals is generally of rapid growth, porous, and abounding in the juices necessary to the perfection of the seeds in a single season. The herbage of some plants is annual, while the roots are perennial, or remain from year to year. Maize is an example of a proper annual; the grasses, of perennial roots, with annual herbage.

APHIS. A family of insects that prey extensively on plants, and are endowed with such astonishing power of reproduction, that though insignificant as individuals they are formidable in their numbers, and in most years occasion more or less loss to the agriculturist. The congregations of aphides consists in spring and summer of apterous and living less individuals, and of nymphæ with undeveloped wings. They have no mouths but are provided with beak-like suckers which they insert into plants, and feed on the juices. Almost every cultivated plant or tree has its peculiar family of aphis; and those trees or shrubs that are wild, or found only in the depths of the forest, cannot claim exemption. What is called the apple tree louse, is an aphis; and on lifting the scale-like covering, the depredator, and its implement of suction, can be seen. Another species infests the tender shoots of grafts, and the thrifty shoots of the apple and other fruit trees, and if allowed to multiply unmolested produces great injury. The American blight, as it is called in England, or the *aphis lanata* of the entomologist, is a destructive species, when permitted to make a lodgment on the apple tree, but fortunately the cotton covering in which it is enveloped renders it easy to discover, and thus timely put the fruit grower on his guard. In passing through the Tonnawanda swamp from Lockport to Batavia in 1838 the Alder, *glauca*, that lined the road was literally loaded in places with a species of aphis, the long cottony filaments of which, erect in air, seemed to be waved at will, and simultaneously, giving a most singular aspect to the branches on which colonies were planted. The turnep is greatly infested with the aphis, as is the rose, fennel, parsley, and many other plants cultivated for use or ornament. The aphis, while fixed by its sucker to the branch or the leaf, elaborates a sweet honey-like fluid, clear as water, and this is projected at will from two tubes in the hinder part of the body. We have seen in the sunshine, these drops falling like the spray of a waterfall, from a fruit tree on the leaves of which millions of the aphis were feeding. It is for this substance that colonies of the aphis are so frequently visited by the ant, which drinks the sweet fluid as it is thrown out by the aphis. Soapsuds, and a strong decoction of tobacco, have been deemed most effectual in destroying them; though when a foothold is once obtained, from their rapid multiplication, extermination is difficult.

APIARY. The place or building in which bees are

kept, is termed an apiary; and where these industrious insects are kept for profit, or for observation, much care is sometimes taken in this department of domestic management. There is no question that keeping of bees, may be made a source of considerable profit at very little expense, as their food costs nothing, and a residence is provided with the very hive in which they are placed. Moveable apiaries are common in eastern countries; and a long boat, with a hundred swarms of bees on board, accompanied by the owner, may be seen floating down the Danube, the Po, or the Nile, anchoring where materials for honey promise to be abundant; and moving onward when the district is exhausted of its sweets. Among farmers, too little attention is usually paid to the apiary; the hives being left exposed to the storms and cold of winter, and the intense heat of summer, without protection. Bees like other domesticated creatures will well repay care and attention.

AQUATIC. Plants that live and flourish in the water are termed aquatic. There are also aquatic animals and birds. All our lakes, rivers and the ocean, furnish specimens of aquatic plants, some of which are of great use and value. A large part of the soda of commerce is obtained from a sea weed, which, drifted ashore, is dried and burned for the soda of the ashes. Hundreds of square miles in the equatorial Atlantic, at some seasons of the year, are covered with this marine vegetation. Some sea weeds, as the algæ, that grow as they float in the water, attain a length of several hundred feet. The rice plant of the East Indies and the Carolinas, is an aquatic plant, and probably contributes as much to human subsistence as any plant on the globe. The wild rice. *Zizania aquatica*, of our northern lakes and rivers is of great service to the native tribes of those regions, feeding the immense quantities of water fowls of all kinds that visit and breed in those inhospitable climes, as well as furnishing food to the natives themselves when their usual supplies from other sources fail them. The flags, rushes, and other grasses that grow in the waters of the lakes, or other quiet waters, the pond lily, &c. are further examples of aquatic plants.

ARGILLACEOUS. A term applied to soils in which clay forms a principal ingredient. It was derived from *argil* or clayey, as aluminous from alumine. In agriculture, argillaceous and aluminous are words of the same import, and mean soils or earth in which clay predominates. '*Analysis*' shows how the proportion can be determined.

ARTESIAN. A kind of well made by boring through the successive strata of the earth until water is found. This name is derived from Artois in France, where the system of boring was first successfully adopted. By penetrating the rocky crust of earth in this way, the water frequently rises to the surface, and flows a living stream; in other cases it rises so as to be obtained without difficulty. In this country wells have been bored to the depth of a thousand feet, and those of 500 or 700 are not uncommon. Various products are obtained from the earth in this way. In Albany a valuable mineral spring has been reached by boring. The great quantities of water at the Kenhawa salines are obtained from Artesian wells. Springs of carbonated hydrogen, that burn with a perpetual flame; and immense reservoirs of petroleum, (the Seneca oil of commerce) have been discovered while boring for salt or for fresh water. Artesian wells have been sunk in the deserts between Cairo and Suez, and abundant supplies of water obtained; and wherever the borings have been properly and perseveringly conducted, either in this or foreign countries, water has usually been procured.

ARTICHOKE. Two plants of this name are cultivated for food; the first *Cyanra scolymus*, is chiefly cultivated in Europe for culinary purposes. The part that is eaten is the receptacle of the flower, divested of the unopened florets, and the bristles that separate them. The head thus prepared is boiled plain and eaten with melted butter and pepper, and is deemed wholesome and nutritious. These *bottoms*, as they are termed, are also made into a variety of dishes, stewed and highly seasoned. The other plant, is the one known as the Jerusalem artichoke, *Helianthus tuberosus*, and is cultivated for the root alone. It is a species of sunflower, grows wild in several parts of South America, and the root is potatoe shaped. The roots are valuable as a food for animals, and are not unpaltable to man. They are found in most of our gardens, an improper place for them, as they are apt to spread, and are somewhat difficult to eradicate. In this country few attempts have been made at their field culture, but those have been profitable. In highly cultivated grounds in England and Holland, they have been found extremely productive, 70 or 80 tons of the roots having been gathered from a single acre. Their flavor is much like that of the former artichoke, when boiled and prepared for the table, and they are very valuable for feeding hogs and store pigs.

CULTIVATION OF FRUIT---No. 12.

THE GRAPE.

Modes of Propagation. Grapes are propagated by *layers* and *cuttings*. The latter is generally said to furnish the best plants, though we know not for what reason. Layers succeed with much more certainty, and commonly produce much more thrifty plants.—They are made by burying a few inches in earth, the middle of the present year's most thrifty shoots; they send out roots at the joint and thus form new plants. The best way is to make a small excavation at the place of burying, press the shoot gently into it, and fill it with earth. As the layer generally roots at two or three joints, it may, when taken up, be separated into two plants. The best time for putting down layers is about the middle of summer.

Cuttings may be taken from the vine any time during the winter. They must be always of the last season's growth, and are best when the buds are round and plump, the joints short and the wood cylindrical; such are found only near the lower part of the shoot, but not at the lowest where the buds are imperfect. Cuttings should generally be from eight to twelve inches long, the upper bud plump and good, and should be cut off about half an inch below the lower bud, and two inches above the upper one. They should be buried in a slightly inclined position, and so deep that the upper bud may be just even with the surface of the ground. The soil in immediate contact with the cuttings, should be rich and very fine, and should be kept moist until the shoot has grown six or eight inches at which time it will have become fairly rooted. All smaller shoots and lateral branches are to be rubbed off during the growth, and the shoot trained to a single stem, that its vigor may be increased by receiving all the nourishment. As it advances, it should be tied in an upright position to a rod. Cuttings planted late generally succeed better than those planted early; they should therefore be kept in a cool cellar or ice house, occasionally moistened to keep them fresh, until settled warm weather, when the temperature will immediately spur them on to vigorous and uninterrupted growth. On heavy soils, cuttings are made to succeed with difficulty; in such cases therefore layering is preferable.

Soil. The best soil is a light, rich, deep loam. It is highly essential to success that it be dug wide and deep round where the plant is to stand, that its roots may penetrate the soil freely. This care would indeed insure success on almost any soil. Although a rich soil is best yet manure should never be applied, unless done a month or two previously, and it be well rotted and thoroughly mixed with the earth. If manured a previous year it will be still better. A very rich soil tends to produce a growth of wood and leaves rather than of fruit.

Transplanting. For directions under this head, see a former number of this series on transplanting. Unusual care is however needed to prevent the roots from becoming dry while removing them. It is of the first importance in their subsequent management, to keep the soil for a few feet around them constantly loose by cultivation and never to permit a growth of weeds.

Pruning. Minute directions are not needed, if it is borne in mind that the great requisites for good fruit are air and light, and a thrifty growth. It may however be observed as a general rule, that all the smaller and weaker branches should be cut away, and only a few the most vigorous suffered to remain, which should be greater as the vine advances in size. It will also be advisable, particularly in pruning the more delicate European varieties, to cut off these remaining shoots to four or five good buds, which will produce as many new shoots the coming season.

Among cultivators of the hardy American sorts, pruning is greatly neglected, and numerous lateral branches are permitted to grow upon all parts of the vine, which is allowed to run to the wildest confusion. That these kinds will grow and bear fruit without any culture is not sufficient; if good crops, and large fruit of fine quality is wanted, the use of the knife must not be spared.

Training. In most cases the most convenient is upon a trellis, consisting generally of a row of posts about six feet above ground, upon which are nailed horizontally three or four peices of strong lath. Over these the branches are to be extended evenly, and tied with bass matting. Varieties which ripen late should be trained upon the south side of a building or wall.

Winter Protection. All or nearly all the European varieties require protection in winter. The easiest way of affording this is to prune them late in autumn, and then remove them from the trellis, prostrate them on the ground and bury them with two or three inches of earth. Stones placed upon the vine to confine it to the earth until buried, are convenient.

Varieties. The best hardy American varieties for the northern states, are the Isabella and York Maderia. The former is the larger fruit and more abundant bearer; but the latter is hardier, earlier, and has less pulp and musk, in which respect it more nearly resembles some of the finer European varieties. The Catawba is excellent, and very splendid in appearance when ripe, but is not so pleasant to most palates as the two former. The Bland or Copper grape is also worthy of cultivation, although the crop is often cut off by frost before it becomes fully ripe. These two should be trained on the south side of a wall or building, where they can receive fully the sun's rays. The White Sweet Water and other European grapes, require much greater care in cultivation, and protection by laying down during winter. They will sometimes endure our winters without protection, but in such cases are always retarded by it in growth, if not destroyed. One vine of the White Sweet Water was covered with the earth, a second was laid down without covering, and a third suffered to remain on the trellis; the first started early in spring and bore well, the second was later, and the third appeared barely to survive. It is also necessary to renew the plants of the European varieties every four or five years, older ones producing invariably mildewed fruit. The Black Hamburg however is a fine grape, appears to withstand our winters well, and produces fruit free from mildew.

The culture of this delicious fruit for the manufacture of wine, is not to be recommended, but there is scarcely any person so situated as not to be able to raise at least one vine for the production of table fruit. The small space occupied, the rapid growth, and the abundant supply of fine fruit, render hardly excusable the neglect of it, even by those who reside in towns and villages and who may consequently have but a few feet of ground to spare. J. J. T.

Heart of an Oak.—One of the piles used in the foundation of the old bridge at Lancaster was taken out a short time since, and found to be "as sound as an acron," although it must have been under water at least 900 years.—*London Chronicle.*

☞ There were upwards of 18,000 packages of domestic cottons exported from Boston to various foreign ports, during the year 1838.

MR. MARSHALL'S ADDRESS.

By the politeness of the author, J. T. Marshall, Esq., we have been favored with a copy of an Address delivered before the Agricultural Association of Plessis, Jefferson Co., on the 26th of September. The subject chosen by the speaker was the "Dignity of the Agricultural Occupation," and it is treated in an able and interesting manner. Did our limits permit we should be pleased to transfer the production entire to our columns, as the spirit in which it is conceived is excellent, and the sentiments in the main correct as well as forcibly expressed. We must, however, confine ourselves to a few passing remarks, and such extracts as will best illustrate the intentions of the writer.

Mr. Marshall infers the dignity of the agricultural occupation from 'its numerical strength;' 'its antiquity;' 'its usefulness to the community;' 'its political dignity;' 'and in the development which this occupation gives to the bodily powers.' Each of these points are well illustrated by example and precept, and place the cultivator of the soil in an honorable and responsible situation. On the farmer rests the burdens and the defence of the nation. On him is depending the preservation of our institutions, and the political character of our government; it is the farmer who gives the moral tone to the community; and the importance of his being well informed is forcibly inculcated in the Address.

Mr. M. further argues the value of the agricultural occupation from the moral and intellectual tendency of the pursuit. From this part of the address we make the following extract, enforcing the necessity of patience in our pursuits and the danger we incur in hastening to be rich:

To my view, this topic deserves more than a cursory glance. To educate man to be patient seems to be a leading design of the Creator. Hence it is that no desirable results appear to be extemporaneous. The Man must first be a child, and pass through a long course of corporeal and mental development. The rich harvest-field, waving with golden grain, must undergo a long and laborious culture. It must be cleared, sown, reaped;—the rain, the sun, and the fertilizing dew must by turns pass upon it before the desired result can come, and the husbandman can bear it to his garner, shouting "harvest home." That tree laden with fruit has been many, many years in reaching the period in which it gives its juicy reward to the hand that placed the tiny seed within the ground. The raft of timber which floats down yondor river to be made into ships and houses is the product of a *century's* growth. Indeed, all things are the result of slow progression. It is a law divinely established and immutable. And that occupation whose tendency is to bring the mind into harmony and beat with this Great Principle, is pre-eminently desirable. That this is *necessarily* the case in your pursuit is evident. I know not a single desirable end attainable in it, but there must first be a compara'ively long preparation. All that you eat, or wear, or sell, or possess, is the product of this Law. In all your work this trait is constantly finding development Let our country and our times be the scene and era of great trials, straits and difficulties, and in the patient endurance of men thus trained, we find a pledge that all which foresight and perseverance can accomplish will be done. Our National character is impulsive and ardent. It is this which leads to over-speculation, and periodical commercial embarrassment: and it is a pleasing reflection that in the class of men I now address, a bulwark of patience is thrown up to restrain its turbulence. By these remarks, I find no fault with our national arder. No. It is the Parent of Enterprise girdling our territory with canals and rail roads, and leading on the Genius of Civilization to a home in the Rocky Mountains. I only wish to rejoice that a balance wheel to this spirit is somewhere to be found.

One great advantage given the agriculturist over the great mass of the commercial or manufacturing interests, arises from their escaping many of the temptations to which the latter classes are exposed. Property with farmers is much more equally divided than with any other men; rarely indeed are they very rich; and still more rarely perhaps is the farmer very poor. He has every inducement to be industrious, temperate and frugal, and very few to spend his time in idleness and improvidence.

We give entire the closing paragraphs of the address, in which the writer enforces the duties that devolve upon the agriculturist. We hope they will be read attentively, as we are sure they will well repay perusal. With regard to what is said respecting existing agricultural periodicals, and the complaint that they are not adopted to a new settled country, we can truly say we have endeavored to adapt our paper to every description of farmers, and every stage of agricultural occupation. If our friends in the new settlements, are anxious to see more matter in our columns adapted to a more early state of cultivation, they have but to furnish us papers, such as they would deem useful, and we will with pleasure spread them before our numerous readers. But to the extract:

Be content with your Occupation. Fix it deeply in your mind that the Dignity of your calling is second to none. Whenever you see men in other walks of life seemingly enjoying more of wealth, of ease, of honor, settle it within your mind that they have no true enjoyments that are not within your reach. Remember that their pursuits are precarious while yours is measurably certain in its results. To-day they may be rich, to-morrow poor; while in your business if well conducted, a gradual though sure progression is made toward competence. Teach this to your sons and your daughters. When they are eager for another pursuit, lay before them the honest claims that agriculture has. Tell them of the peace of mind and of body, and of the high respectability which is the portion of the enterprising, industrious farmer. Bid them beware of the false glare of Speculation. Teach your daughters that to be the wife of an independent yeoman is the noblest station for the matron. And here I may be pardoned for a moment's digression, while I add a word to the female part of this audience. In the beautiful fabrics we have seen to-day the work of your hands—and in the rich butter and cheese, which have adorned our Committee-room, may be perceived how greatly you contribute to the comfort and wealth of society, and to the prosperity of the other sex. In the group of well clad and well conducting children who mingle in this festivity, we see your importance in the social circle. To you it is given to minister in the sweet charities of home. The character of our nation, as it shall appear in the succeeding generation, is in the hands of mothers. How intensely interesting is this fact! But I cannot linger on the thought.

Seek to elevate the calling of which you are members. By this I mean that it were well to demand for it its relative rank among the various pursuits of man. The tendency of man is to elevate that which is showy and noisy, above that which is quiet and unostentatious. In old countries the profession of Arms, has has been by common consent, the leading one. The Military Order has led the way. In this country the Legal profession seems to take the precedence in public estimation. Why it is so I cannot divine. But, in all that makes up intrinsic essential dignity, your profession is in advance of any other. Take your stand, therefore, on this doctrine; not with vaunting pride, but in a well considered confidence. By adding to your intelligence, your moral worth, your numbers, you may be acknowledged by common consent to be what I have assumed.

Seek the intellectual improvement of your class. This is, I am aware, involved in the last considered point, but it is worthy of distinct notice. I would here urge that your schools be well sustained, well taught, and well supplied with books. If it be possible, procure a District Library. This will cost but a trifle when divided among you, and will shed incalculable blessings among your community. Take such periodicals as will inform you of the Agricultural and general intelligence of the passing time. While it is true that 'book farming' has been partially unsuccessful among us as a means of profit, it has arisen from the fact that theory has not been attended by industrious practice. But it is equally true that our agricultural prints contain a mine of interesting matter. I know an individual who by a single hint casually noticed in a borrowed periodical, very greatly increased his crop of corn, sufficiently to pay the subscription for many years for that paper. A thousand facts might be named to prove that papers of this description have, both in the Old World and the New, tended greatly to advance the agricultural interests. One thing in this department is a disideratum, and he who shall furnish it shall have the thanks of thousands: it is a monthly periodical adapted to the wants of the first settler. The Cultivator, the Genesee Farmer, and the like, are better adapted to older farming regions than to such as this. We need one of an entirely different character, and if such an one were issued from the press at Watertown, I doubt not it would have a wide circulation and would communicate important good throughout this and the adjoining new Counties, Before I pass from this topic, I cannot fail to notice the new Literary Institution at Watertown. I need not mention its name, for its praise is on all our lips. Let us hail its establishment as a happy era in the means of education within reach of our sons and daughters. May the blessing of Heaven rest upon it.

Be Freemen. I have endeavored to set forth your importance as a conservative element of our nation. Hence arises the urgent claims your country has upon you that you acquire correct views of your political duties. How indispensible it is that you think, talk, and act like Freemen. Be free from the trammels of party; at least so far free as to vote as your own judgment shall decide. The most miserable of all tools is the tool of a party politician. May the God of the nations save us from that fatal day in which the Great Farming Interest shall not think and act for themselves. Let not the wire-workers behind the scenes move you as they may please. Deem it your birthright, your inalienable privilege, which you will not surrender—to scan the conduct and character of the man who asks your suffrage. Arise to your duty and your privilege in this matter, as you value your country's weal.

If I might not be deemed presumptuous, I would suggest for reflection whether you should not oftener than you do, return to the National and State Legislatures persons from among your own ranks. You have among you men competent to mingle in any public councils under the sun. And when we remember that according to an old and true preverb, "as agriculture goes so goes the State," and remember that five sixths of the population are of this calling, this proposition is strengthened. Indeed, is it too much to say, that *all* laws which have not a primary reference to your class are in so far radically defective? Try it. Send up to the halls of legislature your choice men. Too long have you been content to send those whose habits of life, whose interests, whose views, and business, are not sufficiently agricultural.

Cultivate the kindly and social affections. In a new country like this, the duty is imperative that we help one another. Many, very many among us are poor, struggling hard to make a beginning as it is called. These need counsel, encouragen ent, and aid. A little seed wheat, a little flour or meal, the use of a team for a day or two, or a little advice to a poor neighbor, may turn the scale in his favor. I have known great suffering exist in this community for the want of a very little aid, so little that almost any of us might have given it. But I need not enlarge on this point. I am witness to your kindness and sympathy. In your "logging bees," your "hoeing and raising bees," you have given evidence that you are ready to help each other.

Finally, look well to the *morals* of your class. This is, after all the leaven which shall work out your own and the Nation's prosperity or adversity. With a high tone of moral sentiment, such as is in keeping with the dignity of the American yeomanry, all will be safe. Let Temperance hold her Court among you, and the Sabbath be a day of rest to man and to beast. The interests at stake are immense. You labor for posterity. You hold the earth in trust for the succeeding generation. It is soon to pass from your hands to theirs. Let it go to them with good roads and with well tilled fields, with good fences, with the best of stock, with fruit and flower, with school houses dotting the lanscape like gems in every direction, and with the spire pointing heavenward from every valley. Thus will you have well performed your part. Posterity will accord to you their gratitude. On all around will be found your monument. On hill and dale will be found evidence that you well fulfilled the duties of your day. Thus shall you fall asleep in peace and be gathered to your fathers.

We consider the Address now before us as another proof of the spirit of inquiry and emulation, which we hope to see spreading over our land, and every where producing its legitimate fruits, associations for the promotion of the farmer's interests, for the spread of intelligence by the exchange of experiments, modes, and systems, discussed at such meetings, and an increased sense of the responsibilities which belong to us as farmers, and as citizens of the republic. In the cause of agriculture the citizens of Jefferson county have long taken a deep interest, and its advanced state among them, is proof that such exertions are never lost.

The North Carolina House of Assembly object to the navigation of their rivers by steamboats, because they would *scare away the fish.*

COMMUNICATIONS.

ACCOUNT WITH A WHEAT CROP.

Mr. Tucker—The farmer, like the merchant, the mechanic, the lawyer and the doctor, should have a day of settlement with himslf at the close of each year. In order to do this with satisfaction, we find it necessary to keep a journal of our doings from day to day, or to open an account with each lot or animal with which we may have any deal during the current year.

Although but a farmer in miniature, still I am in the habit of keeping an accurate account with each lot, that I may know the gain or loss sustained in the different operations with the same. I propose at this time to give you an account of my wheat crop the past season. The lot consisted of two acres of ground, of a gravelly soil, with the exception of a small spot of clay upon one side of the field—is situated in the valley of Marcellus, rather elevated compared with the adjacent land, and has a southern and western exposure. The wheat succeeded a crop of peas.

Lot No. 2.	Dr.
To ploughing first time, 1 day,.....	$2 00
To " second " "	2 00
To drawing, spreading and cost of manure...	10 00
To 3 bushels seed wheat, 12s.,.....	4 50
To brining, liming, and services for same,...	50
To 1.2 day dragging, 16s.,.....	1 00
To weeding wheat, 8s.,.....	1 00
To reaping and drawing in barn, ...	6 00
To thrashing and cleaning same,.....	3 50
To boarding men while engaged as above,...	4 00
To interest on capital, $100 per acre,.....	14 00
	$48 50

Cr.—By 50 bushels wheat sold at barn, 12s. 6d.....	$78 00
By straw from same,.....	5 00
By after feed,.....	2 00
	$85 00
	48 50
	$37 00

Remarks.—Corn preceded the pea crop. These two crops were chosen for the purpose of exterminating some patches of red root, (Euphornia officenlis.) that had made its appearance in the lot. In this, however, I was disappointed, as its appearance among my wheat afterwards too fully verified. The red root, or as it is frequently called "wheat thief," from its supposed deadly influence upon that crop, seemed (from the thick and vigorous growth of wheat) much impaired in its healthful aspect, its stocks being exceedingly small and delicate, from which I infer that it is not a destroyer of wheat, but that it may of itself be destroyed by *wheat*. It delights in grounds that have been frequently ploughed, and flourishes well in wheat lots where its blades are thin, or have been killed out by the frost. The rapid increase of this pernicious weed in the western part of our state, calls for immediate and efficient measures on the part of farmers to arrest its wide spreading devastation. A strict observance in the rotation of crops, cultivating less land, instituting a more thorough and nice system of culture, are among the means best calculated to annihilate this, like all other weeds, and thus improve the appearance and value of our farms. The manure was fine and well fermented, evenly spread over the lot. My intentions were to have the dung drawn and spread after the second ploughing and merely dragged in with the wheat; but in this, owing to some derangement in the ploughing process, I was disappointed, save a strip of about three rods wide across the lot, on which the wheat come up more thick and vigorous than when the manure was ploughed in and subsequently dragged. Indeed, the difference through the season was so apparent as to be noticed many rods from the field. I was much disappointed in the yield of my crop; a number of gentlemen were in the lot during the harvesting, no one of whom adjudged less than thirty-five bushels per acre. The growth of straw was very great, to some extent down, especially upon the clay spots, so as to prevent its filling. Had I used less manure and less seed in all probability I should have had more wheat, and perhaps of a better quality, though of the latter I have no reason to complain. The wheat worm lent its aid in diminishing the quantity but to what extent I am unable to say.

Respectfully yours, &c. L. J. T.

Marcellus, Jan. 4th, 1839.

ON WINTERING CALVES.

Mr. Tucker—To winter calves it requires the first rate of care and attention to have them live and do well through our long and dreary winters. I believe the best method to winter calves, is to stable them. It requires much more care and attention to winter calves out in the storms, and they will need more food and are more liable to freeze than they would be if they were stabled in a warm stable. The most of farmers in this vicinity, keep their calves out in the coldest place they can procure, and say they will do better than in a warm stable where the storms cannot beat upon them and fill their hair full of snow and ice. I know of a great many farmers in this section, that always have the first rate of calves, and on asking them the cause of having so much better calves than their neighbors, they will tell you they stabled them winters. Such men will always have good cattle, and it does not cost them half as much as it does those who winter their calves in the coldest place they can produce in their barn yards, thinking they will do better than to have a warm and comfortable stable to lay in through the long and cold winter nights. There are many farmers in our country that pretend to raise calves by letting them go to a stack of hay, that was stacked for the purpose in the summer, and there the calves are obliged to gnaw upon the stack to obtain sustenance, until there is danger of the stack falling upon them; then the farmer is obliged to remove them to another, and so on through the winter; and when spring arrives, the calves are almost reduced to skeletons, (scarcely able to walk.) Now calves kept in this way, cost more and will not look half so well when spring comes. A great many farmers pursue this method because it saves labor, and a great deal of trouble too. Some suppose calves need no water in the winter, but in my opinion, they need water as much as our cows or oxen. If there is no water in the lot where farmers keep their calves, they ought to have a trough, and carry them water at least once a day. When calves are once wintered through, there is no danger of them in future; they will thrive and grow into money as fast as any thing a farmer can have. There is no easier way for a farmer to enjoy a pleasant and quiet life than to raise stock. All that is required of him is to see that his cattle are well taken care of, and have plenty to eat. Nothing looks so handsome as to see in the spring of the year, a lot of calves, and all in good condition to thrive through during the summer. If calves are well taken care of in the winter, there is no danger but what they will look fine in the spring, and make far better cattle when they arrive at three years old. The beginning is what decides the future life of calves, if the farmer commences right, and keeps his calves from the cold storms of winter, he will have good calves and good cattle too: and will not cost the farmer any more than if he had turned his calves out to a stack and let them obtain their sustenance as well as they could, and if they weathered through well enough if not all the same.

Thus we can see the different opinions that farmers pursue in our happy and prosperous country upon wintering calves, and after all there is only one true and just method of wintering calves, to have them look handsome and in a thriving condition when winter has passed away, and spring has come with all its attendant beauties.

W. S. T.

South Venice, N. Y., Jan. 15, 1839.

RUTA BAGA.

For the information of those who yet doubt the value of this vegetable for fattening beef, (and many such there are) I would make this statement. In the fall of 1837 I purchased a large framed farrow cow for $20, and milked her through the winter and until July 15th. She abundantly paid her keeping until this time. I then kept her in good pasture until the middle of October, when we began feeding her with ruta baga and continued it until the last of December, when she was slaughtered, and weighed 976 lbs. and yielded 110 lbs. of rough tallow. She being worth at the present price of beef, $60 40. Gentlemen Farmers, make your own comments.

E. W.

Locke, Cayuga co., Jan., 1839.

Mode of Cultivation pursued upon Neswick Farm, near Driffield;

The Property of John Grimston, Esq., occupied by George Legard, Esq. and Mr. T. Wheatley; for which a prize was awarded by the Yorkshire Agricultural Society, August 29, 1838.

[From the Transactions of that Society, recently published.]

This farm contains nearly six hundred acres of land, of which about four hundred are arable, and the remainder permanent sward. The soil consists, for the most part, of a strong clayey loam; the subsoil being a bed of reddish clay varying from two to three feet in thickness, and resting upon the chalk rock, which forms the basis of that extensive district, termed the East Riding Wolds; upon the Eastern inclined plane of which the farm is situate.

It is proposed *first* to mention the rotation or general course of cropping that has been pursued on this farm, and *secondly*, the mode of cultivation applied to each course.

1st.—Rotation.—The four course, or alternate mode of husbandry has been adopted; viz., that which in general terms may be thus described:—

First.—Turnip Fallow.
Second.—Spring corn, barley or oats.
Third.—Red or white clover seeds.
Fourth.—Wheat.

If this system of husbandry could for a continued series of years be invariably followed, without deterioration to the crops, or disadvantage to the land, the cultivation of a strong soil farm would be reduced to a very simple process; nor would any extended detail of its operations be deemed serviceable to the interests of agriculture. Experience, however, has proved the contrary. For although the corn crops may be permitted to follow, each in their turn without variation, yet the green or alternate crops seem by certain natural laws to deteriorate, if recurring so frequently as once in four years. Very ingenious theories have lately been propounded on this subject, and possibly as the science of agricultural chemistry advances, and a knowledge of the food of plants and the analysis of soils shall assume a more definite shape, the practical farmer, who has hitherto sought for success in his crops, from a system of routine and alternation such as that about to be described, may be enabled to attain it more readily, by the scientific application of certain manures to certain soils. As far, however, as past experience has taught us, not only has it been found necessary to modify and subdivide the *turnep course*,—this crop being uncongenial to strong soil,—but still more essential has it been found to keep the land *fresh to seeds;* for of all agricultural vegetables does the clover family appear the most inclined to degenerate from too frequent recurrence. The mode of husbandry, therefore, that has been adopted on this farm, the following table may serve to explain.

	1	2	3	4
	Acres.	Acres.	Acres.	Acres.
3rd Period of Four Years.	50	100	50	100
2nd Period of Four Years.	50	100	50	100
1st Period of Four Years.	50	100	50	100
	Tares 25 mown 25 depastd.	Barley or Oats	Red Clover mown.	Wheat.
	Turnep	Barley or Oats	Tares depastd.	Wheat.
	Tares 25 mown 25 depastd.	Oats or Barley	Clover Seeds depastd.	Wheat.
	Turnep	Barley or Oats	Tares depastd.	Clover Seeds depastd.
	Tares 25 mown 25 depastd.	Turnep	Red Clover mown.	Wheat.
	Turnep	Barley or Oats	Tares depastd.	Clover Seeds depastd.

By this table it is shown, that with respect to course No. 3, an alternation of cropping has been adopted, which operates throughout a period of twelve years; and that thus, as regards the clovers, the same crop does not recur upon the same land but once in that time. Into course No. 1, a similar variety has been introduced, and which may still further be modified, as in each year seems to be advisable, by dividing the turnep crop into about equal portions of Swedish and white; but as this depends upon circumstances, it has not been thought necessary to notify it in the table. Thus much for Rotation. We next proceed to the mode of cultivating each crop.

First Turnep Fallow.—One-half of this course is annually appropriated to *tares*, which are sown upon wheat-stubble in the month of October; one moiety mown for the use of horses, &c., the other depastured until midsummer. The land is then ploughed and cleaned as a summer fallow; manure laid on in the autumn, and ploughed in; and in this state it lies over winter until spring-corn seed-time arrives.

The other half receives a turnep fallow treatment, viz: a ploughing after wheat. And here must be mentioned the use of lime, which, upon soils of this nature, is productive of the most beneficial effects. It has been the practice on this farm to use annually about 160 chaldron of chalk lime, at the rate of 8 chaldron per acre, upon the wheat stubble. As soon as other farming operations permit, this lime is spread, and the land ploughed for winter tempering; and as early in spring as the season admits, it is cross-ploughed; then drag-harrowed, rolled, &c., and thoroughly cleaned. When it is made sufficiently fine and clean, as soon after the 20th of May as possible, preparation is made for sowing Swedish turneps. First of all, the prepared land is set out in straight rows or drills, twenty-six inches apart; then come single horse carts with fold-yard manure, each in its progress along the drills depositing sufficient manure to occupy three rows, and this at the rate of from ten to twelve tons per acre; which manure being at first thrown casually out of the carts, is immediately afterwards beaten and reduced by women laborers into a continuous and uniform line. Then succeeds the double mould board plough which closes the rows; and lastly comes and terminates this series of operations, the turnep drill with a small roller attached, depositing its seed lightly within the surface, and exactly in the centre of the row.

The same method prevails for white turneps, the only difference being in the time of sowing; about a month later.

Of late years, bones have been used on this farm very successfully in the culture of white turneps, at the rate of twelve bushels to the acre; bone and seed drilled together, at about the same distance apart, and on a level surface. These turneps are principally led off the land in autumn and winter, and consumed by cattle in the fold-yards; a small portion is occasionally consumed on the ground in October for ewes, when the ram is first put to them; and, provided the weather be dry, other sheep may be folded upon them; but, on this soil, to depasture turneps in wet weather, is fatal to the succeeding corn crop.

It is only further necessary in this section to mention the mode adopted for converting the straw into manure; a most important element in the well-conducting a farm of this discription. It has already been stated, that the turneps are almost all drawn, and given to cattle in fold-yards; in addition to this food, each beast consumes daily about 7lbs. of linseed cake. There are four folds appropriated to this purpose, and each fold is capable of containing twelve or thirteen beasts *not tied up*. The turneps and cake are given in square troughs or tumbrils, which being occasionally moved about from place to place, causes a more equal trampling of the straw than if they were fixed. In this manner, the straw produced from two hundred acres of corn, is annually converted into the richest manure.

Second, or Spring Corn Course.—One-half of this follows turneps; the other half, the fallow after tares mown and depastured. As soon as the ground is cleared of turneps, and the weather dry enough, the land is ploughed, not very deep, which is the only ploughing it receives; then, when seed-time arrives, (which time it is impossible to fix, fluctuating, as the case may be, betwixt the middle of March and May-day,) the land is drag-harrowed across the ploughings, repeatedly thus scarified, and if it be clotted and hard, Croskill's clod crusher is frequently used with good effect. Then the seed is drilled nine inches apart. At the interval of about a week, that portion of this course allotted to red or white clover seeds is sown, drilled also.

Third, or Clover Course.—The alternations of this course, it has been endeavored to explain by the preceding table; its mode of cultivation may be very briefly described. By that which is generally termed *clover* is meant, red clover only; of which about 21lbs. are sown to the acre, and it is mown and made into hay, the aftermath eaten by sheep and lambs, and wheat sown. The term *clover-seeds* includes of white clover one stone, of a mixture of trefoil, rib-grass and parsley (*aethusa cynapium*) one stone. It is depastured by sheep, and wheat is sown. The portion of this course devoted to tares is not sown till after harvest. It being admitted that tares are at best but a poor subst tute for clovers, and not a desirable antecedent to wheat, it becomes necessary to use some sort of tiliage to counterbalance any ill effects; and for this purpose we have tried, and approved of rape-dust sown with the wheat, at the rate of fourteen bushels to the acre.

Fourth, or Wheat Course.—First, wheat after clover or clover-seeds.

We have never been in the habit of sowing wheat before Michaelmas, but as soon after as the season serves. The clover ley is ploughed in with a furrow eight inches broad and four deep. A *presser* follows two ploughs, and is so constructed, with a very simple species of drill-box attached to it, as to deposit the seed by the same labour required for the operation of pressing. About two and a half bushels of seed wheat to the acre; land then harrowed and cross harrowed.

Secondly, wheat after depastured tares.

If the crop of tares has been a bulky one, the same system of ploughing and pressing is adopted as after *clovers*, with merely the additional tillage of rape-dust; which act the drill-presser is also capable of performing. But if the spring has been ungenial, or the summer very dry, the tare crop has not unfrequently been unworthy of remaining on the ground beyond midsummer; in which case the land is broken up and fallowed, and the wheat eventually *drilled* not *pressed*.

Expenses.—To give a detailed account of the expenses incurred involves very considerable difficulty; for a detail of the various contingent expenses of a farm of this extent, an estimate of the wear and tear of horses and harness, and of the repairs of implements; and in short of all the other undefinable outgoings, could only be accurately shown by a transcription of the yearly accounts; and would not serve the purpose which, it is presumed, the Committee have in view. The following averages, however, will, in some degree, exhibit the amount of labor employed.

Horses.—14 strong working horses are regularly employed, which during the time of their being in actual work, consume 2 bushels of oats per week, each, and, instead of hay, chopped oat sheaves unthrashed, is mixed with their corn; the cost of this mode of feeding is, weekly,

	s.	d.	£.	s.	d.
2 bush. of oats each at 2s. 6d.	5	0			
Chopped food, say 1 stone a day, at 6d. per stone,	3	6			
			0	8	6

Laborers.—Seven men hired by the year, viz.

1 Shepherd at	£21		
1 Foreman	24		
1 Waggoner	15		
1 Ploughman	11		
1 Ditto	10		
1 Ditto	9		
1 Ditto	6		
Board of these seven at £20 each,	140		
		236	0	0
Three day laborers, regularly employed during the year, at 12s, each per week		93	12	0
In harvest 18 additional laborers are required, for say, 5 weeks, at 22s. per week		99	0	0
Women 10 employed hoeing wheat, 10 days each, at 1s,		5	0	0
10 picking turnep fallows, do		5	0	0
10 hoeing spring corn, 10 days each, at 1s		5	0	0
10 during turenp sowing, beating manure, &c. 9 days each, at 1s.		4	10	0
Hoeing turnips, 50 acres at 4s. per acree		10	0	0
Drawing, topping, and tailing turneps in winter, 50 acres, at 8s, per acre		20	0	0
Women and other laborers assisting in thrashing, at various times		20	0	0
		£198	10	6

May 21st, 1838. GEORGE LEGARD.

*** The horse labor of this farm would be very much increased, were it not for the use of a steam engine, erected in the year 1819, for the purpose of thrashing and grinding corn for the use of the farm, which engine consumes about thirty chaldrons of coals annually.

From the Practical Farmer.

LIME AND ITS APPLICATION.

Sometime in the month of August, we addressed the following circular, to farmers in Pennsylvania, with a view to elicit facts on the application and use of lime to improve soils.

(circular.)

It is hoped that agricultural readers generally, who have used lime to improve their lands will favor us with *communications* embracing the results of their experiments in the use of lime. As fast, and as soon as we receive communications, we shall lay the substance of them before the readers of the Practical Farmer.

1. Upon what *kinds* of soils has lime been used?
2. In *what* quantitities?
3. *When* or *upon* what kind of crops?
4. With what success?
5. What crops followed immediately after applying lime?
6. The lime used, was it procured from *calcarous or magnesian* lime stone?
7. What is the difference in these two varieties in their effects?
8. How long has lime been continued—or its effects been visible?
9. Is lime extensively used in your county?

In reply to the above queries, we have received the following from our highly respectable friend, Mr. Johnson, of Bucks Co., Pa.

Buckingham, 8th mo. 19, 1838.

Respected Friend—I have before me a number of the Bucks County Intelligencer, containing a communication from the editor of the Practical Farmer, which I should be glad to answer in a manner commensurate with its importance; but being not in possession of any experiments accurately detailed, I shall only be able to reply to the various queries of the said communication, in a way rather indefinite. However, if the facts which I shall state, should prove of any utility as aid in thy investigation, thou art at liberty to use them in any manner thought expedient.

1. The soils on which lime has been chiefly used, that have fallen under my immediate observation, *are limestone, and one of light* sand abounding *in quartzy pebbles* and *conglomerate rocks* of the some materials.

2. On each of these it has been used at the rate of from 25 to 100 bushels per acre.

3. The crops to which it has been applied have been various. However, when the rotation of corn, oats or wheat has been pursued, it has more frequently been spread on the sward newly ploughed for corn, and by the dressing of the crop, it becomes incorporated with the soil. A very common mode of applying it in this region is by top-dressing, without reference at all to succeeding crops which may occupy the field.

4. Last mode of application where it has been tried in this neighborhood, I think has been attended with the *best success*. It certainly has these advantages, that a larger quantity may be applied without danger of injuriously affecting the quality of the soil, and if the season should continue to be as moist as usual, the improved growth of the grass the first season of its application. Lime is becoming extensively used on our limestone land in this valley within a very few years; and by its use in five or six years, I have known the products of some of our good farms to be doubled and even quadrupled. Some of our farmers think the *manner* of application of great consequence; but it is agreed by *all* that the main point is to *get it on the soil at all events*.

5. As to the crops which are to succeed the liming we do not esteem the point of very great consequence. It is believed, however, the straw of either oats or wheat is improved when these crops succeed immediately. For this reason, when used in reference to the crops at all, it generally precedes the corn.

I believe the lime used in this region is almost universally of the *calcareous* kind. I know of none that has been suspected of containing *magnesia;* nor am I acquainted with the effects of the latter *earth*.

[Will the Editor of the Practical Farmer furnish to his readers a cheap and ready process by which the presence of magnesia, in limestone may be detected.

W. H. J. *]

7. I have no experience in the results of *magnesian* lime applied to soils in any manner.

8. Our farmers think the effects of lime are perceptible from ten to fifteen years according to the quantity used and mode of application. When incorporated with the soil, I believe its effects continue much longer—but it appears to me they are not near so great at the time of the first application.

9. Lime is extensively used in our county upon all kinds of soil. As a manure ("*stimulating manure.*") In this place I think it has increased within ten years four hundred per cent. It is hauled this season from fifteen to twenty miles from our kilns. Vast quantities

of it are transported on the Pennsylvania canal. The current price in this place is ten cents per bushel. Our kilns are now generally constructed to burn coal with grates—having alternate layers of coal and limestone. Within four or five years wood was almost exclusively used. Hence the business of manufacturing the article is greatly facilitated in using coal. The labor of tending-kiln, is dispensed with, and the expense of burning much lessened. It costs about three cents a bushel to burn with Lehigh or Beaver meadow coal—and about six cents with wood. The latter is now scarcely ever used. Perpetual kilns are used in a few places; but the mode above mentioned is the one in general use.

Permit me to say in conclusion that the mode adopted for eliciting information on this subject, has my warmest approbation. I believe that it will be the means of eliciting a mass of facts, which, if exhibited to the public may add much to the wealth of Pennsylvania. I shall always be free to contribute my mite, when leisure may be afforded on this or any other topic connected with agriculture, although I may be able to say but little.

Thy friend, WM. H. JOHNSON.

* *Remarks.*—Immediately on receiving the above communication, we consulted several agricultural works and books on chemistry, to furnish a simple test to detect the presence of magnesia in limestone; the only only one we thought simple is the one given in *Davy's Ag. Chem. Pa.* 221. "Magnesian limestone effervesces little when plunged into an acid. A simple test of magnesia in a linestone is this circumstance, and its rendering diluted nitric acid or aqua fortis milky"

This test appeared to us not sufficiently satisfactory, hence we addressed a note to Professor W. H. Allen, of Dickinson College, Pa. on the subject, who very politely furnished us a *test* more satisfactory than Davy's test.

Carlisle, Oct. 27, 1838.

I. D. Rupp, Esq.—Your letter of August 23d came to town while I was absent on a journey in the eastern states, and having been unfortunately mislaid, was not handed me on my return at the close of our vacation. Looking over some papers a few days since, I found it, and now hasten to give it the earliest attention in my power.

I am glad that the accidental delay in sending you the desired information has been harmless, inasmuch as I learn from your letter, that you already possess the information you ask. The cheapest and easiest method of detecting the presence of magnesia in limestone, with which I am acquainted, is that which you extracted from *Davy's Agricultural Chemistry.*

Magnesian limestone effervesces less violently in acids than common limestone, and gives a milky appearance to diluted nitric acid. The limestone should be broken into small fragments and put in a tumbler or wine glass, and the aequa fortis diluted with two or three times its volume of water should be poured upon it. If after the effervesence has ceased, the solution has a whitish cloudy appearance, the presence of magnesia is indicated.

A more complicated, though perhaps a more satisfactory test is the following. Dissolve in a tumbler a portion of the limestone, supposed to contain magnesia, in sulphuric acid, (oil of vitrol) considerably diluted with water. To the solution add oxalate of ammonia so long as a white percipitate continues to be formed. The insoluble oxalate of lime gradually subsides, and the magnesia if present is retained in solution. Pour off a small portion of the colorless solution of pure potassa. If magnesia be present a white precipitate (hydrate of magnesia) will be produced.

The injurious effect of magnesia on vegetation in many soils, renders it important that farmers, who use lime for manure, should be able to ascertain whether their limestone contains any considerable quantity of that pernicious earth.

I remain very respectfully your ob't servant,

WM. H. ALLEN.

Buckingham, Bucks Co., Pa., August 19, 1838.

Mr. Rupp—Having perceived by your communication in the Bucks County Intelligencer, that you are desirous to obtain facts relative to the use of lime as a manure, and having been myself for many years a practical farmer, as well as a close observer of the operations of other farmers, I think, I can communicate some interesting facts respecting lime.

The soil of Bucks county natuurally fertile, has been reduced to sterility, by repeated succession of crops without manuring; consequently it became indispensably necessary that the soil should be improved beyond the limited power of stable manure. To effect this we had recourse to the application of lime. The esults exceeded the expectations of the most sanguine.

The lime used in the immediate neighborhood is the alcareous—it is undoubtedly superior to the magnesian. Lime is used here for all kinds of of grain and grass; at all seasons of the year; and upon all kinds of soil.

A distinguished farmer, who has had much experience in the application of lime was asked how and when it should be applied, answered—"Be sure and put it on." The question being put to him the third time, he replied once and again—"Be sure and put it on." Thereby implying that all that was necessary was to put it on. However, I believe that if any season is more preferable than another, it is spring. The ground is better in a state suitable to receive the action of it. Should the season prove dry, lime the first year does more hurt than good, especially on dry sandy soil; but the good effects are perceived the succeeding years. Lime put on ground which is immediately sown will prevent it from ripening evenly.

Reduced soil is like the emaciated human body, it requires sustenance to be administered in small portions at first, and more when its strength will bear it. Land extremely reduced will not bear more than forty bushels to the acre. Land in a tolerable good condition, will bear eighty. Cold, wet soil always requires more than dry, sandy soil.

Lime will without a doubt, be visible for many years after it is put on. Mr. Stacy Fell, a gentleman of great experience in agricultural pursuits, and who has applied a vast quantity of lime on his two large farms in Buckingham, says that the effects of lime have remained plainly visible on a sterile field of his for twenty years after it was applied.

The best farmers in this vicinity put on about fifty bushels of lime and twenty loads of stable manure on an acre every five or six years. This manner of proceeding rapidly improves the soil.

Urgent business prevents me from communicating more facts at present; but I will write again to you shortly.

Yours,

WALTER MOOR.

Washington, Lancaster Co., Nov. 1838.

Mr. Rupp—I have since I saw you last, made a tour through Franklin county Pa., Washington and Frederick county, Md. In looking over my "Journal" I find that it will take me sometime to arrange the facts collected under appropriate heads, before I shall send them to you for publication. Suffice it to say, that my Journal has swollen to an enormous size—exceeding several hundred pages closely written, although I have studied brevity, as you may see from the following.

I called to see, in passing through Franklin, among others, William Heiser, Esq. two miles south of Chambersburg. His farm is on the Franklin Rail Road—it is well improved. From all the arrangements, buildings, fences and fixtures the observant tourist is struck, and convincingly too, that Mr. H. is a practical and scientific farmer. Convenience, comfort and economy seem to be inscribed upon every thing on and about his farm. His improved stock is worthy of notice. He has among others a fine Durham bull, 2 years old, weighing 2500 lbs.; for which he paid $1000—He is the finest of the kind I have ever seen. His milch cows, &c., adorn the stock of his farm, which is highly improved.

In other parts of this country there are many fine farms, and improvements are onward—Lime is being extensively used to improve the soil, and its beneficial effects are visible wherever it has been applied. In some parts of Washington county, Maryland, lime is used, and would, in all probability be more extensively used, were it not for the exorbitant price it commands—it sells at from 16 to 21 cents per bushel. However, it is confidently believed the price will soon be reduced, and lime more generally used to improve soils—there are many kilns building in those parts of Frederick county through which I passed. In the northern part of this county some attention has been given to the culture of the sugar beet and other roots, and notwithstanding the long continued drought, a considerable crop has been realized, at least sufficiently so as to encourage farmers who make the trial, to bestow more attention upon root culture.

Having ever since you published your "circular," directed my enquiries more particular to the subject of lime I herewith contribute a mite on that important point. Mr. Hedge, about six miles from Frederick city—up the Monococy—informed me that he put about forty bushels of lime per acre on a meadow six years ago, and that the proofs of its valuable effects, were of the most satisfactory kind, in the abundant crops of grass the meadow has yielded ever since. He applied the lime in the fall, and after spreading it, harrowed the meadow well. The experiment has proved so satisfactory, that he is going to lime the remainder of his farm. I would here observe that the soil is limestone abounding with quartz. My own observation convinces me that lime is beneficial upon all kinds of soil. One fact is worthy of communication touching lime. In my excursions through the above counties and through York and Lancaster, I found the corn, wherever the land had been limed, suffered less from the general drought we had this summer.

This I found peculiarly to be the case in some parts of this country, respectable farmers informed me that this was generally the case, when fields had been limed the fall previous, that the corn crops were good.

It is the unanimous opinion of farmers who have tried lime, that the beneficial effects of it are visible for from 20 to 30 years.

Benjamin Jordan, Esq. of Dauphin Co. near Middletown, pointed me out a field, a part of which was limed forty years ago, and said that the effects of lime were still more or less visible. Another gentleman of the same neighborhood informed me that the beneficial effects of lime could be distinctly seen "to the furrow," where it had been applied, twenty-five years ago.

MR. INGERSOLL'S PIGGERY.

[concluded]

Brookline, Dec. 24th, 1835.

Dear Sir,—I received your favor of the 21st ult., a long time after its date, and not until it was much worn and chafed with its travels ere it reached me. I will endeavor to answer your enquiries in detail. The following is a "summary view of the total quantity of each kind of food used in my piggery per annum," and the months in which they are used; beginning with the 1st of July, which is about the time I begin to depend upon summer vegetables, viz:

	bush.
July and August—Mangel wurtzel, roots and tops, being the thinnings from two squares each, containing 32 rods,	800
Summer squashes,	200
Early cabbages,	100
September, October and November—Winter squashes or pumpkins, *	700
Large drum head cabbages,	800
Trimmings of mangel wurtzel turnips, &c. &c.	150
December, January, February, March, April—Mangel wurtzel,* (roots)	200
Carrots,	900
Ruta baga,	200
Cabbages,	1500
May—Parsnips which are left in the ground during the winter, and allowed to grow in the spring, until their tops are from 4 to 6 inches high, when they are daily dug as wanted, and all boiled,	500
June—Potatoes,	250
Early lettuce, peas, chopped up vines and pods when the peas are full grown, though still green,	250
Bushels,	6550

We also mix the vegetables by boiling some of either kind in each kettle.

My farming or rather gardening, goes upon the principle of cultivating but little ground, and by great attention to get large crops, and in some instances two from the same land. The form of one piece constantly in cultivation is an oblong, thus divided with an alley or walk 4 feet wide in the centre.

No. 1. Of the upper side was sowed this year with mangel wurtzel, thinned out several times as described in a former letter, and finally cabbage plants set out two feet apart, (for winter crop,) taken from square No. 3, of the lower side.

No. 2. Has now a crop of parsnips left to grow the next spring, to furnish food for the month of May.—The frost, however severe, does not injure them, and they are very much liked by the hogs. The advantage of preserving without trouble through the winter makes them valuable.

No. 3 Upper side, produced parsnips that were dug in the month of May, and 4th of June was sowed with carrots. Produce 237 bushels of the short kind.

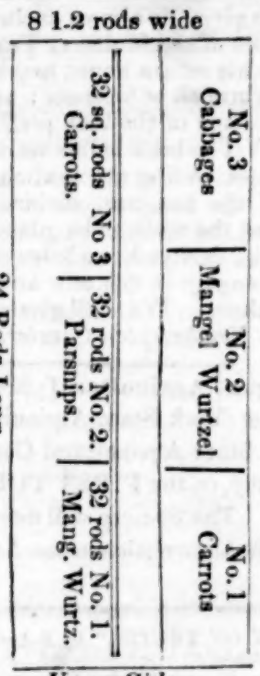
No. 1. Of the lower side was cropped with carrots this year; of the long orange kind. Produce 248 bushels.

No. 2. Bore the crop of mangel wurtzel I described to you in a former letter.

No. 3. Cabbages.—The ground was laid out in 8 beds, 4 rods long, and 1 wide; the 12th June, it was sowed with Pomfret cabbage seed, in rows 2 feet asunder. They were thinned out, as plants were wanted to set other places so as finally to stand 2 feet apart. Produce 500 bushels.

This piece of land is constantly cropped in such routine, that the same vegetable occupies the same square once in three years. Each square is annually manured with *well rotted* hog dung, and always at the rate of 4 cart loads for 40 cubic feet. The cabbage square has in addition 20 bushels of unslacked wood ashes.

The aggregate produce this year of the whole 6 squares, or 1 1-5 acres was as follows, viz:


8 1-2 rods wide
No. 3 Cabbages
No. 2 Mangel Wurtzel
No. 1 Carrots
32 sq. rods No 3 Carrots.
32 rods No. 2. Parsnips.
32 rods No. 1. Mang. Wurtz.
24 Rods Long.

Upper Side.

No. 1. Mangel Wurtzel tops and roots all boiled together, 510 bush.
Cabbages transplanted, 500 do.
1010 bush.
No. 2. Now filled with parsnips—no doubt, 500 do.
No. 3. Carrots, 237 do.

Lower Side.

No. 1. Carrots, 248 do.
No. 2. Mangel wurtzel, 523 do.
No. 3. Pomfret cabbages, 500 do.

Bushels, 3028

Upon the borders of this garden ground, which is one rod wide, I have a row of fruit trees. Under them we have lettuce, early cabbages, ruta baga for transplanting, and such vegetables as our family require. But upon the plat above described nothing grows to shade the crops devoted to the piggery.

A second piece of ground, contains a square acre, and is divided into four equal parts and cropped in this manner, viz:

1-4 acre early potatoes and peas for family use. Of the peas, those not wanted, are chopped up, vines and all, and boiled in June. This land is cleared soon enough for a crop of transplanted Swedish turneps, or ruta baga.

1-4 acre, summer squash. Produce 200 bushels.
1-4 acre carrots. Produce 310 bushels.
1-4 acre cabbages. do. 560 do.

These two pieces of land are my sheet anchor—they are highly cultivated and neatly dressed, without a weed allowed to seed upon them.

I annually cultivate besides, 3 acres of field land by breaking up 1 1-2 acres; and laying down the same quantity. These 3 acres are cropped as follows, viz:

1 acre potatoes, 250 to 300 bushels.
1 acre winter squash or pumpkins, 700 to 900 bushels.
1-2 acre cabbages, 1000 bushels.
1-4 acre mangel wurtzel, 250 Roots, tops &c. given to sheep and cows.
1-4 acre carrots, 250

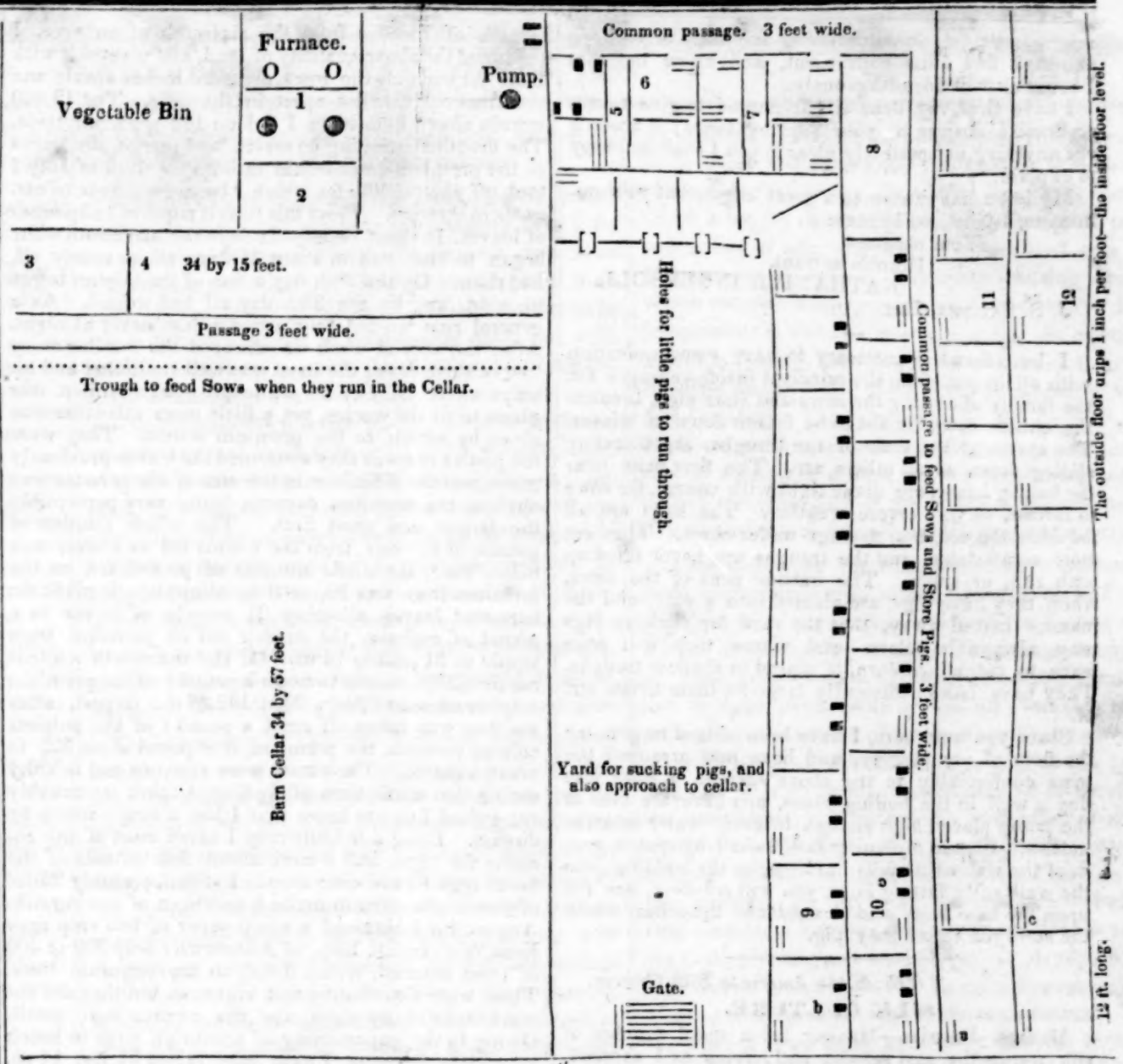
2500 bushels.

These crops are an average for the last 3 years. My whole farm, (if it deserves that name,) is only 21 acres, within a ring fence. Of which one acre or more is occupied by buildings, yards, and approaches to them.

To carry on all my operations I keep two hired men through the year, one of whom however, does the duty of house servant at the same time; and I hire besides day laborers and cattle to plough, to amonnt of $150 more. It occupies about the whole time of one man, to take care of my stock, consisting of 160 hogs, 60 sheep, 1 chaise horse, 1 cart horse, and one cow; though they are both together, and when the animals are fed, are employed in the gardens in summer, and in winter getting out manure for the next season.

In answer to your question respecting the "probable marketable value of the vegetables on my farm," I would observe that the kinds and quantities of many which I raise, could not be sold at all; as for instance, the mangel wurtzel, ruta baga, and all the tops and trimmings of others. Mr. Quincy tells me, he this year sells carrots in Boston, after carrying them 8 miles, at $9 per ton, or 18 cents per bushel. Cabbages are sold by the load at 2 cents each, or about 8 or 10 cents per bushel. Parsnips and winter squashes must be retailed, and pumpkins in any quantities would not sell for anything.

To answer your question about market gardeners, I have endeavored to recollect who among my neighbors have been successful and long established in that line,


Furnace.
O O
1
Vegetable Bin
Pump.
2
3
4 34 by 15 feet.
Passage 3 feet wide.
Trough to feed Sows when they run in the Cellar.
Barn Cellar 34 by 57 feet.
Common passage. 3 feet wide.
Holes for little pigs to run through.
Common passage to feed Sows and Store Pigs. 3 feet wide.
Yard for sucking pigs, and also approach to cellar.
Gate.
The outside floor drips 1 inch per foot—the inside floor level.
12 ft. long.

EXPLANATION.

1. Boilers.
2. Swill Trough.
3. Vegetable Bin.
4. Boiling House and Vegetable Bin.
5. Passage to feed.
6. Small pens for sows to pig in, in cold weather.
7. Passage to feed.
8. Grain Bin.
9. Outside pens for sows—4 feet by 7 by 1.2.
10. Inside pens for sows—7 1-2 feet long by 5 wide.
11. Inside pens for store pigs—6 feet square.
12. Outside pens for store pigs—4 feet by 6.

a. Troughs.
b. Door.
c. Trough Door.

and I cannot select a single individual who has not driven his own cart to market, until he had sons old enough to take his place, and thus by attending to the minutiæ of the business prevented that fraud and deception, that a gentleman farmer cannot easily avoid. When I first bought my estate, I sat up a market cart, got a stout horse, and a man well recommended, but my daily receipts kept growing less and less; my man and horse were out late every evening, and after a vexatious and mortifying experiment, I was convinced, that I must either find a market for my vegetables upon the place, and under my own eyes, or give it up as a losing concern—for I could not bring my mind to the constant and daily competition, for trifling sums, which a man habituated to it from infancy, rather takes pleasure in.

Manure bought in Boston, costs them two dollars per buck load, of 62 or 63 cubic feet, trod hard and moderately heaped, in its unrotted state. The expense of carting put at the lowest rate, cannot cost the farmer less than $1 50 per load, and when they bring it on hire, they charge $2 50. My whole stock annually furnishes three hundred such loads, which after using all I want, find a ready sale among the market gardene s in my neighborhood at $3 per load, they taking it away with their own teams.

This manure is without any mixture of pond mud, sods, &c, which. had I access to such materials, might be very profitably increased.

As it respects steaming, instead of boiling vegetables, the only expense saved is fuel, for the same labor is necessary in filling and discharging them. Our laboring people require to have their work simplified as much as possible, and their judgment not often called into exercise. Were I to tell my man to steam 18 bushels of vegetables, and to give one-third of them 3 times a day to the stock, the consequence would be, that a much greater quantity would be given at one time than another, and though the whole would be consumed in the course of the day, still the inequality of feeding would be hurtful. Besides in winter, particularly the swill, must be very warm, which could not be at night with vegetables steamed in the morning. Upon the whole therefore, I prefer to say to him, "fill the kettle with vegetables, and after they are boiled away sufficiently to make room, put in one bushel of cracked corn and oats, and give the whole for breakfast," thus making out the exact line of duty, and leaving nothing to his discretion.

I give the swill warm in summer, and almost hot in winter, and always sweet and fresh. In conversation with Dr. Derby, he argued upon the propriety of feeding with sour food, and that cold. I have formerly tried it, and satisfied myself that it was wrong. Pigs may be habituated to eat it; but place this cold stuff in a trough, and a good smoking hot breakfast of mine in another beside it, and I will venture to say, they will soon show a preference.

I never spay sows, because *we have no one who knows the mode*, which is to be regretted. They are sometimes admitted to boar a few weeks before killing.

In yours received yesterday, through Wells and Lilly, you ask my opinion of the Byfield breed of hogs. As breeders they are the worst I know. The sows have small litters and destroy them oftentimes by laying down without any care. They are long coarse-haired animals, and very apt to be mangy, nevertheless to mix with almost any other breed, a Byfield boar is valuable, being a quiet race, and disposed to get fat at an early age.

The Bedford is a hardier kind, and make good nurses. But for our uses have too much lean meat in proportion to their fat—their hams from that circumstance are excellent—a cross between a Byfield boar, and a Bedford sow furnishes a profitable and handsome stock.

Inclosed is a sketch of my piggery. I thought it

might assist you in determining the mode of building yours—I find mine convenient, and know not that I could alter it advantageously.

I have thus, my dear sir, attempted to give a comprehensive answer to your interrogatories; if there is yet anything not perfectly clear to you I shall be happy to explain.

My letter has run on to a great length, but your politeness, I trust, will excuse it.

Your obedient
Humble servant,
NATHANIEL INGERSOLL.

J. S. SKINNER, Esq.

—

I have found it necessary to have communication with all the pens from the principal *inside* passages for the facility of moving the sows and store pigs, because the outside doors are apt to be frozen down in winter. The spaces at the ends of the troughs, are therefore sliding doors, as all others are. The four pens near the boiling house, are made tight with covers, for sows to farrow, in very severe weather. The hogs are all fed from the common passage under cover. They eat more comfortable, and the troughs are never filled up with rain or snow. The outside pens of the sows, when they have pigs, are cleared into a cart, and the manure carted away, that the yard for sucking pigs may always be clean—and where they will soon learn to eat whole corn, if placed in shallow troughs. They have holes sufficiently large for them to run out of.

Since you were here, I have been obliged to new lay the floor of my piggery, and have now arranged the pens conformably to the above sketch. I have also dug a well in the boiling house, and have the nose of the pump placed high enough to carry water into the kettles. Should my spring fail, I shall by spouts conduct the water that falls in rain upon the building, into the well. My fatting hogs, you will recollect, are fed upon the barn floor, and cleaned into the cellar, where the sows run before they pig.

[*From the American Silk Grower.*

SILK CULTURE.

MESSRS. EDITORS—Having fed a small number of silk worms the past season, and having as I suppose, succeeded well, I send you a brief account of my fixtures, feeding, &c. If you think my experience will in the least degree aid the good cause in which we are in common engaged, you are at liberty to publish it. My cocoonery is 36 feet by 18, two stories high, lathed and plastered, with a chimney at each end, and a cellar under the whole. The building is substantial and well finished. It has 28 windows and 5 doors, blinds and venetian shutters. The building was intended to be converted into a dwelling in the event of its not being used as a cocoonery. Two rows of shelves, the whole length of the building, were put up, each shelf one foot above the other, so that I had large aisles between the rows of shelves and around them, affording ample room for feeding the worms and changing the hurdles. My hurdles are three by four feet, made with cotton twine, not knit, but crossed as a bed cord. I supposed I had accommodations for feeding 2 or 300,000 worms hatched in succession. I accordingly procured two ounces mammoth white eggs, from Mr. Stone, of Burlington, which were understood to come from Germantown, Pa. and several ounces of sulphur colored, from Mr. Comstock, of Hartford. These were all put in a glass jars, and placed in the ice house about the first of April. The 15th of June, the mammoth white were taken out and exposed for hatching, and in a few days, about 5250 of them hatched, which was all I obtained from the two ounces. I then exposed those I obtained from Hartford, not one of which hatched. Disappointed in my eggs, I called on Mr. A.M Jerome, of Princeton, who supplied me with a paper of eggs which were in the process of hatching. These I brought home on the 26th of June, and about 25,000 of them hatched. I had then altogether about 30,250 worms. I placed them all on the shelves in the second story; about 12,000 on one side of the room, and the balance on the other side. I fed the whole on the multicaulis, grown from roots and cuttings planted this spring. During the whole time of feeding, the temperature ranged very high, being several days as high as 93 degrees Fahrenheit, and seldom less than 72 degrees.

When I commenced, all the knowledge I had on the whole subject was "book knowledge." I had never seen a cocoonery, and never but once had seen worms feeding. My colored man, who had never seen worms, gathered the leaves and fed the worms until within about two weeks of winding, when I employed an aged man to assist him. Having some leisure, I spent considerable time in the cocoonery, determined to watch the feeding with care. A premium of $100 having been offered by the Monmouth Silk Manufacturing Company, to the person who would raise the greatest number of pounds of cocoons from the sixteenth of an acre, I measured the above quantity of land, and planted it with roots set upright, the rows eighteen inches apart, and the trees eight inches apart in the rows. The 12,000 worms above alluded to I fed on the premium trees. The drouth continuing so severe, and fearing the leaves on the premium trees would fail, on the 19th of July I took off about 5000, for which I borrowed leaves to carry them through. From this time it required 143 pounds of leaves. In about twenty-six days the mammoth white began to rise, and in about 31 days all, or nearly all, had risen. On the 28th day a few of the sulphur began to wind, and by the 35th day all had wound. As a general rule we fed four times a day, never at night. After the second week we changed the hurdles every two or three days; the room was well ventilated and always sweet and clean. Although good attention was given to all the worms, yet a little more attention was given by myself to the premium worms. They were fed just as often as they consumed the leaves previously given, and the difference in the size of the cocoons was obvious, the premium cocoons being very perceptibly the largest and most firm. The whole number of pounds of cocoons from the worms fed as above, was 86lbs. 9oz.; the whole number of pounds fed on the premium trees was 38, or if an allowance is made for borrowed leaves, allowing 21 pounds of leaves to a pound of cocoons, the number fed on premium trees would be 31 pounds 14 oz. Of the mammoth white it required 350 cocoons to make a pound; of the premium sulphur cocoons 290 to 300; 192 of the largest, after the floss was taken off made a pound; of the sulphur colored cocoons, not premium, it required about 325 to make a pound. The worms were vigorous and healthy during the whole time of feeding, I think remarkably so; indeed I do not know that I lost a single worm by disease. Being a healthy crop I saved most of my cocoons for eggs, and I have about four pounds of the finest eggs I have ever seen. I stifled, probably 25lbs. of cocoons in order to make a specimen of sowing silk. August 4th I obtained a small paper of two crop eggs from Wm. Imlay, Esq., of Allentown; only 300 or 400 of them hatched, which I fed on my premium trees. These were also healthy and vigorous, but they did not wind under thirty days, and the cocoons were small. Owing to the impossibility of procuring eggs to hatch in successive crops, I have only raised 31 lbs. 14 oz. from my 1-6th of an acre, though my trees are smaller than yours in Burlington. This, I believe, is not more than one half the amount I could have fed if I had been able to procure eggs and hatch them as wanted. The trees do not appear now to have lost any of their foliage. Enough has been done, however, to show that raising silk is profitable even the first year in the hands of the most inexperienced. I hope you will write an article on this subject, and from what *has* been done, show what *can* be done. From my inexperience, I am perfectly satisfied there is no mystery or difficulty in feeding the silk worm. If the eggs are from a healthy crop, and if the worms are kept clean and well fed, sucess is certain, and from the acknowledged enterprise of our people, I am perfectly satisfied the silk business will succeed, and at no distant period will become a source of vast national and individual wealth. May your valuable publication aid, as I have no doubt it will, in hastening this, by inducing our intelligent farmers and others to engage in the business.

Yours truly,
R. V. M'LEAN.

Freehold, N. J. Sept. 20, 1838.

Forcing Mulberry Trees.

The rage for growing Mulberry trees excites the most sober people. A number of large green houses, conservatories, cocooneries and other establishments have been fitted up in this town for growing these costly trees during the winter months, and the culinary departments and even some of the ladies' parlors contain the germs of future forests of Mulberry trees. In three or four large establishments, there cannot be less than two hundred thousand cuttings out, part of which have sprouted beautifully, and by the month of April they will amount to something considerable in the shape of trees. The purpose is to increase the shrubs in size, so that when the spring opens they will answer to lay down, or put out in the shape of cuttings. A box two feet wide and four feet long, with a foot of earth, will contain over one hundred cuttings, which can be placed in any warm corner. In three months, they will have grown sufficient to multiply, by laying them down, into nearly a thousand trees, by next autumn.—*Northampton Courier.*

"*Eight Year's Experience* and observation in the culture of the Mulberry Tree, and in the care of the Silk Worm," is the title of a neat little volume of 161 pages, about to be published by Mr. Butler. Mr. Samuel Whitmarsh is the author of the work, and with his practical knowledge, he must be well fitted for preparing this publication. The time he spent in Europe a few years since, was given up almost exclusively to researches into the culture of the Mulberry Tree, and the growth of Silk. Since his return home, he has constantly been occupied in this branch of business; and doubtless, from experience, he is one of the best practical silk growers in the country. The book before us contains simple directions and unpretending observations on the different departments of the business, divided into appropriate heads. It is just the work to be placed in the hands of every person who desires knowledge on this subject, or who intends to engage in this new and lucrative department of Agriculture. We shall give some extracts from it next week.—*Northampton Courier.*

Annual Agricultural Meetings.

☞ The New York State Agricultural Society, and the New York State Agricultural Convention, are both to meet in Albany, on the FIRST TUESDAY IN FEBRUARY next. The Society will meet in the City Hall, at 11 A. M.; the Convention in the Assembly Chamber, at 4 P. M.

"THE BOOK OF FRUITS," by Robert Manning, of Salem, Mass. Also—

"The American Flower Garden Companion," by Edward Sayers, Boston—price 75 cents each. For sale at the Rochester Seed Store.

Jan. 20th, 1839. REYNOLDS & BATEHAM.

Morus Multicaulis.

FOR SALE.—A few hundred very fine *genuine* Morus multicaulis Trees *not trimmed*.

ALSO—10,000 cuttings of do. H. T. ROGERS,
Rochester, Jan. 7, 1839.—jan 5-tf 17 Arcade.

1000 Dollars Wanted.—A Hint.

THERE is more than one thousand dollars owing us from distant customers, mostly in small accounts, which have been standing from four months to four years. And lest some of our dilatory friends should think that we have forgotten them, or that their account is too small to be regarded, we would inform them that we have debts to pay too, and in order to extend our business and do justice to others, we must insist on more punctuality on the part of some of our customers. "Do you take?"

REYNOLDS & BATEHAM.
Rochester Seed Store, Jan. 1st, 1839 jan 5-2t

WM. PRINCE & SONS will make sales of trees and cuttings of the genuine Chinese Morus multicaulis, Morus Papyrifera, Alpine, Broussa, Canton, and other varieties, deliverable to the purchaser at such period in the spring as is convenient to them, and will enter into contracts accordingly. Prices and terms for the trees and cuttings will be forwarded to all who may apply for them by mail, as well as prices of Silk Worm Eggs, Mulberry seed, &c. The Multicaulis Trees are remarkably vigorous, and as we first imported the genuine tree, purchasers are sure of obtaining the true kind. It is from this cause and from the great attention paid by them, that the trees they have sold have given universal satisfaction.

Flushing, near New York, Dec. 26, 1838. jan 5-8t

For Sale.

A SMALL FARM, finely situated, and of uncommon productiveness, near a large village on the Erie Canal, and admirably adapted to the dairy business and marketing. For further particulars, and terms, inquire at this office. Dec. 29-tf

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

Wheat Farms for sale in Western New-York,

IN the counties of Monroe, Orleans, Genesee and Erie—varying in quantity from 50 to 300 acres each—under a good state of cultivation and improvement, with suitable buildings, fences, &c. watered with durable streams, and most of them have wheat on the ground. Five to eight years credit can be given, if wanted, on the whole principal sum, with annual interest. These farms are situated in the midst of a rich agricultural district, unsurpassed in the richness and productiveness of its soil; lying on the banks of the Erie canal, and in the vicinity of Rochester, Lockport and Buffalo, affording at all times a ready and sure market for all the articles of produce, which at present prices amply reward the husbandman and enables him with a few crops to pay the first cost of his lands. A favorable opportunity is here presented to the enterprising farmer who would wish to obtain a good farm on liberal credit, with sufficient means to secure the payment of one-third of the purchase money. Letters (post paid) promptly attended to.

Rochester, N. Y., Dec. 8. 1838.-4w JOHN C. NASH.

Genuine Morus Multicaulis.

THE subscriber has still for sale, one thousand genuine Morus multicaulis, of thrifty growth and untrimmed. They are choice trees, selected for their size, and will afford a large quantity of cuttings. ASA ROWE.

Greece, October 27th, 1838.

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April 1, 1838. ASA ROWE.